



(19)

Generated Document.

(11) Publication number: **01208834 A****PATENT ABSTRACTS OF JAPAN**

(21) Application number: 63032930

(51) Intl. Cl.: H01L 21/302

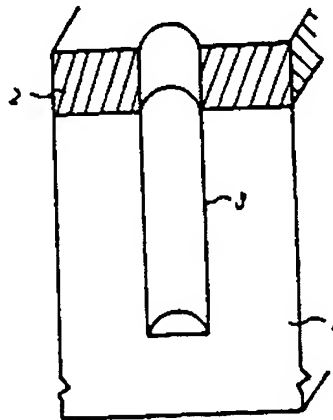
(22) Application date: 17.02.88

(30) Priority: (43) Date of application publication: 22.08.89 (84) Designated contracting states:	(71) Applicant: AGENCY OF IND SCIENCE & TECHNOL (72) Inventor: NAKAMURA NOBUO NAKAGAWA KIYOKAZU KURE TOKUO (74) Representative:
---	---

**(54) ETCHING METHOD****(57) Abstract:**

**PURPOSE:** To improve the accuracy of etching for fine working by using the mixed gas of an isotropic etching gas being represented by SF<sub>6</sub> and having large reactivity and an anisotropic etching gas containing heavy ions easy to be dissociated to a symmetrical shape.

**CONSTITUTION:** A mixed gas mainly comprising at least one kind of a gas selected from a group composed of SF<sub>6</sub>, CF<sub>4</sub>, NF<sub>3</sub>, XeF<sub>2</sub> and F<sub>2</sub> as an isotropic etching gas and at least one kind of a gas (where X represents at least one kind selected from a group consisting of Cl, Br, I and H) selected from a group made up of (CXF<sub>2</sub>)<sub>2</sub>, (CX<sub>2</sub>F)<sub>2</sub> and (CX<sub>3</sub>)<sub>2</sub> is employed, and plasma etching is conducted. Accordingly, since etching can be performed by extremely low high frequency power, a resist can be used as an etching mask, and a vertical etching hole 3 can be formed when an Si substrate 1 is etched, employing the resist 2 as the mask.



COPYRIGHT: (C)1989,JPO&amp;Japio